

Remarks

A. Amendment to the Claims

Claim 1 has been amended to more particularly point out the present invention by setting forth in the claim language that the insulating block substantially fills the passage such that the side surface of the block resides in sufficiently close proximity to the sidewalls of the passage as to impede air flow therebetween. Support for this additional language is found in paragraphs [0014] and [0030] of the specification.

Claim 8 has been amended to form an independent claim which includes the limitations of as-filed claim 1, upon which claim 8 (as filed) was dependent.

Claim 9 has been amended to further define the position of the weatherstripping. Support for the additional language is found in paragraphs [0022], [0025], and [0043] - [0046] of the specification and in Figures 5-8.

Claim 13 has been amended to remove the limitation of the handle and to further define the close proximity of the side surface of the block with respect to the sidewalls of the frame. Support for the additional language is found in paragraph [0014] of the specification.

Claims 14 - 16 have been added to include claims directed to the preferred materials for the block. Support for these claims is found in paragraphs [0030], [0038], and [0042] of the specification. Support for the fire retardant surface set forth in claim 16 is also found in paragraph [0010] and in Figures 3-5.

Claims 17 and 18 have been added to add the limitations set forth in claims 2 and 3 into claims dependent on claim 8, rather than on claim 1. Support for these claims is found in paragraphs [0016] and [0036] of the specification and in Figures 3 - 5, and 9, as well as in as-filed claims 2 and 3.

Claims 19 and 20 have been added to set forth the preferred height for the frame set forth in paragraph [0037] of the specification.

B. Amendment to the Drawings

Figures 1, 3, 5, and 9 have been amended to add bracketing for the exploded views to correct the deficiency noted by the Examiner. Replacement sheets for these figures are being provided herewith.

C. Response to Rejections Under 35 U.S.C. § 102

Claims 1, 8-10, and 13 were rejected as being anticipated by U.S. Patent 6,615,544 to Tlemcani et al. Applicant and his representatives respectfully disagree with the Examiner's interpretation of the Tlemcani reference, which is felt not to teach, disclose, claim, or make obvious the structure set forth in these claims of the present application. Applicant's representatives are willing to agree the claims may be broadly construed for the purpose of determining patentability; however, such broad interpretation must be within reasonable limits. In the present instance, Applicant's representatives feel that the Examiner's position goes beyond any reasonable limit of the breadth of the claim language in order to find the present invention in

the prior art.

The Examiner is reminded that section 2111 of the MPEP, citing the *en banc* decision in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005), states that claims must be “given their broadest ***reasonable interpretation consistent with the specification***” (emphasis added). Furthermore, MPEP section 2111.01 points out that “the words of the claims must be given their plain meaning” unless such is inconsistent with the specification. Applicant’s representatives maintain that the Examiner has construed some of the claim language to an extent not consistent with section 2111, and thus the as-filed claims should be in a condition for allowance. Some of the claims have had clarifying language added to point out with greater particularity some aspects of the invention set forth in the specification, thereby bringing such features to the attention of the reader and more clearly distinguishing the present invention over the prior art.

With regard to claim 1, Applicant’s representatives respectfully disagree with the Examiner’s position that door 14 of Tlemcani, which has a hollow core (column 3 lines 30 -33) and preferably made of aluminum (column 3 lines 41 -42) would constitute an insulating block. Furthermore, the abstract identifies the door as an insulation free aluminum door, and additional references to the door being a hollow, aluminum, insulation-free structure is found in column 2 lines 24-39.

In addition, interpreting an aluminum structure as providing an insulating block is felt to be inconsistent with the plain meaning of the term “insulating”. Webster’s New World Dictionary, Third College Edition (Simon & Schuster, Inc., 1988) defines “insulate” as follows:

“2 to separate or cover with ***a nonconducting material*** in order to prevent the passage or

leakage of electricity, heat, sound, radioactive particles, etc.” (page 701, emphasis added - copies of the dictionary definitions are provided herewith as Attachment A).

The same dictionary further defines a metal as follows:

“1 a) any of a class of chemical elements, as iron, gold, or *aluminum*, generally characterized by ductility, malleability, luster, and *conductivity of heat* and electricity . . .” (page 852, emphasis added).

In view of these definitions, it is not felt that one could reasonably interpret the claims so broadly as to consider aluminum to provide an insulating material for the claimed block.

In addition to not being formed of an insulating material, the door 14 of Tlemcani does not have a structure that would reasonably be considered to provide a block as claimed. The same dictionary referenced above defines a block as follows:

“1 any large, solid piece of wood, stone, or metal, often with flat surfaces.” (page 149)

The hollow Tlemcani door is not solid, and in fact appears to be open on one side. The Tlemcani patent teaches that the door 14 is formed from a bottom wall 16, a top wall 18, and side walls 20 enclosing a hollow core 22 (see column 3 lines 31-32 - note that the Tlemcani disclosure appears to be inconsistent with regard to the hollow core, since the self closing mechanism 50, which appears in Figures 3 - 5 to reside entirely outside the space enclosed by the side walls 20, is described in column 3 lines 53-55 as being mounted in the hollow core 22). Such a hollow structure would not provide a solid structure. Compared to a block, such a structure would suffer even if made from an insulating material, since convective air currents within the hollow core

would tend to facilitate heat transfer across the structure. Additionally, as shown in Figures 4 and 6 of Tlemcani, there is no side wall 20 on the side of the door closest to the hinges 24, and thus this side is open, further distinguishing the Tlemcani structure from a solid block. With particular regard to Figure 6, it might be noted that this view does not appear to be a section along the line indicated in Figure 4, since the handle 40 is visible and the side wall 20 furthest from the hinges and running parallel to the handle is shown in section; a copy of Figure 4 with what is believed to be the correct section line and the sidewalls 20 emphasized is included herewith for the convenience of the Examiner as Attachment B.

For the reasons set forth above, it is not felt reasonable to interpret the term “insulating block” in the present claims to be met by the hollow, open aluminum door of Tlemcani. Since the Tlemcani patent neither teaches, discloses, claims or suggests the use of an insulating block for insertion into a passage, it is felt that the reference does not qualify as a 35 U.S.C. §102(e) reference and thus, for this reason alone, the rejection should be withdrawn.

Furthermore, this is not the only distinction between the present invention and structure taught in the Tlemcani patent. The door of the Tlemcani patent does not substantially fill the passage, as required by claim 1 as-filed, but rather leaves large gaps between any side walls 20 and the frame 12. In fact, a large gap is required between at least one of the sidewalls 20 and the frame 12 to accommodate the collapsible supporting mechanism 52, as was pointed out to the Examiners during the interview. With these gaps, the Tlemcani door will not substantially fill the passage if the claim term “substantially fills” is given its “broadest *reasonable interpretation consistent with the specification*”. The specification points out that having the block “substantially fill” the passage results in the side surface of the block being in contact with or in close proximity to the sidewall of the frame over a substantial portion of the side surface and the sidewall (see paragraphs [0013] - [0014] and [0030]). In contrast, the side walls 20 of the

Tlemcani door 14 will not reside in contact with or in close proximity to the frame 12 so as to impede air flow between the side walls 20 and the frame 12. Clarifying language has been added to claim 1 for the term “substantially fills” so as to have the language of the claim, on its face, limit the scope to that which would be consistent with this term when read in view of the specification, thus negating the need to look to the specification to give the claim its broadest reasonable interpretation consistent with the specification. It should be noted that, if air flow is not impeded, such may again result in heat loss due to convective air currents. Tlemcani teaches that the gaps between the side walls 20 and the frame serve to house the closing mechanism, as well as a latch mechanism 80 (see column 2 lines 40-44 and column 3 lines 56-59); it should be apparent that gaps sufficiently large as to accommodate the movement of mechanical elements would be too large to impede air flow, and thus Tlemcani et al. are felt to teach away from a structure where a block substantially fills the passage in which it resides.

It should also be pointed out that, since the sidewalls of the Tlemcani frame are vertical (see Figures 5-8), if the side wall 20 of the block parallel to and spaced apart from the hinges were modified so as to be in contact with or in such close proximity to the frame 12 so as to impede air flow therebetween, this close proximity would cause interference and prevent the door from being swung into or out of the passage, as is set forth in claim 1, both as filed and as currently amended.

For the reasons set forth above, it is felt that claim 1, both as filed and especially as presently amended, should be clearly patentable over the teaching of Tlemcani.

Claim 8 contains all the limitations of as-filed claim 1, and thus should be allowable for the reasons set forth above. Claim 8 is also felt to provide further distinction over Tlemcani, since it requires the frame to have a sloped front wall and the block to have side and back facets

which reside in close proximity to side and back walls of the frame, as well as a front facet having a portion which can mate with the sloped front wall. Tlemcani et al. are not felt to teach such limitations.

As pointed out above with regard to claim 1, the walls of the Tlemcani frame are all shown as being vertical, and thus there is no sloped wall. The Examiner's position that a slope could be considered to be ninety degrees is not felt to be consistent with the definition of the word "sloped". Webster's New World Dictionary, Third College Edition defines the word as follows:

"1 to have an upward or downward inclination; take an oblique direction; incline; slant"
(page 1263).

It is not felt that the vertical sidewalls of the Tlemcani frame would meet this definition, as they are vertical, rather than inclined. Furthermore, as discussed above, if the front side of the Tlemcani door were placed in close proximity to a front wall of the frame, the door could not be swung into and out of the frame.

With regard to the door of Tlemcani, the office action refers to the vertical sidewalls bounding the rectangular cross section of the passage as 20, which cannot be correct, as the sides 20 in Tlemcani are part of the door, rather than the frame. Furthermore, the Tlemcani door has no side and back facets that are in close proximity to the side and back walls of the frame, if the term "close proximity" is properly read in view of the specification. As discussed above with regard to claim 1 as presently amended, the close proximity serves to impede air flow, which would not be true of the large gaps between the Tlemcani side walls 20 and the corresponding surfaces of the frame 12.

With further regard to a back facet, there does not appear to be any such facet in the Tlemcani door. As shown in Figures 4 and 6 of Tlemcani, there is no side wall 20 (facet of the present claim) on the side of the door closest to the hinges 24, and thus no back facet residing in close proximity to the portion of the frame residing under the hinges. Furthermore, even if such a back surface were provided, Figure 3 shows that such a surface would be spaced apart from the frame a distance similar to that of the side walls 20 discussed above.

The Tlemcani door also lacks a front facet having a portion which mates with any wall of the frame, let alone one which is sloped. As shown in Figures 5-8, the side walls 20 of the Tlemcani door are spaced apart from the sidewalls of the frame and do not engage them. In fact, the sides 20 do not touch any part of the frame 12, and the door 14 is retained in position only by engagement of the top wall 18 of the door with the flange 32 and, possibly, engagement of the bottom wall 16 of the door with the bottom wall 13 of the frame. Furthermore, the side wall 20 which is positioned opposite the hinges (shown in section in Figure 6), which would be considered to form the front facet, is spaced apart from the frame a sufficient distance to accommodate a lock 43 and the latch mechanism 80 (see Figure 4).

For the reasons set forth above, it is felt that claim 8 should be clearly patentable over the teaching of Tlemcani.

With regard to claim 9, this claim as presently amended is felt to provide an additional limitation to those of claim 8 upon which it is dependent. In particular, there is no teaching in the Tlemcani patent of a weatherstripping seal in the location set forth in this claim. Furthermore, inclusion of such weatherstripping might cause resistance to closing, obviating the self-closing mechanism 50 taught by Tlemcani.

With regard to claims 10, this claim is felt to provide a further limitation to those of claim 9 upon which it is dependent, this further limitation in the location of the weatherstripping not taught in the Tlemcani patent.

With regard to claim 13, as currently amended claim 13 provides further characterization of the close proximity of the side surface of the block to the sidewall of the frame, and is felt to provide further distinction over the prior art of Tlemcani. In fact, it is felt that Tlemcani et al. Teach away from the claimed limitation, since a separation of about 1/8 inch would not provide sufficient space to accommodate the self-closing mechanism 50, the lock 43, or the latch mechanism 80.

For the reasons set forth above, it is felt that the rejection of the claims based on Tlemcani is not proper, and that independent claims 1 and 8, as well as the claims dependent thereon, are clearly allowable over the teaching of Tlemcani.

D. Response to Rejections Under 35 U.S.C. § 103

Claims 2-6 were rejected as obvious based on Tlemcani et al. in view of Hackbarth et al. (U.S. Patent 6,578,327). Since these claims are dependent on claim 1, which is felt to be allowable for the reasons set forth above, these claims should also be allowable. Furthermore, these claims introduce additional limitations which the Examiner states are not taught by Tlemcani, but only by Tlemcani when combined with the teaching of Hackbarth.

With particular regard to claims 2 and 3, the Examiner stated that it would be obvious to modify Tlemcani to have a rim on the lower edge of the frame, as taught by Hackbarth, to

simplify fabrication by only having one rim that extends both outwardly and inwardly, and in order to provide a frame that can be attached to a ceiling from below. It is not felt that either of these proposed motivations to modify Tlemcani are appropriate.

With regard to ease of fabrication, Tlemcani does not discuss the method of fabricating the frame 12, or even specify whether it is fabricated of the same material (aluminum) as the door 14. However, it appears from the cross section views of Figures 5-8 of the Tlemcani patent that the frame members are formed as integral pieces (most likely by extrusion) with the outward-extending rim (not numbered) and the inward-extending flange 32 and bottom wall 13 being integral with the sidewall (not numbered). Since these various elements are already formed as an integral unit (most likely by extrusion), it does not appear that forming the rim even with the bottom wall 13 rather than adjacent to the flange 32 would simplify fabrication as suggested by the Examiner. It should be noted that moving the rim of Tlemcani to attach to the lower edge of the frame rather than the upper edge would result in exposing a greater portion of the frame to fire, and might require a greater amount of intumescent material to be applied to provide protection, which would increase material costs. Thus, there is felt to be no motivation to modify the Tlemcani reference as suggested by the Examiner.

With regard to the Examiner's statement that "it is notoriously well known" to attach a rim to the lower edge of a frame rather than an upper edge, Applicant's representative questions why the Hackbarth reference was chosen to support such, since Hackbarth et al. do not teach a rim positioned as the rim claimed in claim 2 that would provide the function of the rim of the present invention, but rather teaches a rim that serves to attach the frame to ceiling joists. As set forth in paragraphs [0016], [0036] - [0037], and [0041], the flange formed by the rim of the present invention serves to cover gaps between the lower edge of the frame and the cut-out into which the ceiling hatch is installed. The Hackbarth rim could not serve to cover gaps, since it is

shown as residing above the surface material of the ceiling (see Figure 2 of the Hackbarth patent).

For the additional reasons set forth above, as well as for the reasons set forth with regard to the distinctions of claim 1 over Tlemcani, it is felt that claims 2 and 3 are clearly patentable over the cited references, considered either alone or in combination.

With further regard to claim 4, as discussed above with respect to claim 8, Tlemcani does not teach a frame having a sloped front wall or a block with side and back facets that reside in close proximity to walls of the frame. Furthermore, Tlemcani lacks a block having a front facet where at least a portion thereof resides in close proximity to a wall of the frame, let alone a sloped wall (it should be noted that claim 4 does not require a portion of the front facet to mate with the sloped surface, only to reside in close proximity thereto). As pointed out above, all the sides 20 of Tlemcani are spaced apart from the walls of the frame to provide space to accommodate the self-closing mechanism and the lock. It should be pointed out that, while the Examiner states that claim 4 is rejected based on Tlemcani in view of Hackbarth, no reference is made to Hackbarth in the discussion of claim 4, and the issues with regard to claims 2 and 3 are addressed above. Thus, claim 4 is felt to provide further distinction over the cited references.

With regard to claims 5 and 6, these claims provide further limitations to the structure set forth in claims 1-4, and thus are felt to be allowable for at least the reasons set forth above with regard to those claims.

Claim 7 was rejected as obvious based on Tlemcani et al. in view of Hackbarth et al. and Kompelien (U.S. Patent 6,701,676). Since claim 7 is dependent on claims 1-6, it is felt to be patentable for at least the reasons set forth above with regard to those claims. The Examiner

argued that it would be obvious to modify the combination of Tlemcani and Hackbarth to include a folded rubber weatherstripping gasket as taught by Kompelien “in order to provide a stronger, continuous seal”. Since Tlemcani already teaches the use of a fiberglass gasket 34, which is presumably coextensive with the flange 32, for a seal, it is unclear how substitution of the folded rubber gasket of Kompelien would increase either strength or continuity. Additionally, Kompelien only teaches the folded gasket 33 employed in combination with a rectangular gasket 34, raising doubts as to the satisfactory performance of the folded gasket 33 if employed alone. It might also be noted that Kompelien teaches that the folded gasket 33 is located near the lower edge of the frame, while the rectangular gasket 34 is taught as residing near the upper edge of the frame, as required by claim 7. Furthermore, the Kompelien gasket appears to require an L-shaped groove to accommodate the gasket (see column 3, lines 16-26), which would tend to complicate fabrication compared to the fiberglass gasket 34 that simply rests on flange 32 in Tlemcani. In view of the above, there is felt to be no motivation to combine the references in the manner suggested, and claim 7 is felt to provide further distinction over the cited art.

Similarly, claim 11 was rejected as obvious based on Tlemcani et al. in view of Kompelien. The remarks made above with respect to claim 7 are felt to apply equally to claim 11.

Claim 12 was rejected as obvious based on Tlemcani et al. in view of Muth et al. (U.S. Patent 4,738,054). Again, claim 12 contains all the limitations of claim 1, and thus should be patentable for the reasons set forth above with regard to claim 1. The Examiner argued that it would be obvious to modify Tlemcani to include elements of the Muth et al. structure. Not only is there felt to be no motivation to combine the references, but it is also felt that the resulting combination would lack the structure set forth in claim 12.

Muth et al. are not felt to teach a block cap attached to a top surface of an insulating block

and extending therebeyond to engage an upper edge of a frame in which the block resides. The Examiner characterizes Muth et al. as teaching “a block cap (48) attached to the outer surface (46) of an insulating block and extending therebeyond so as to engage the upper edge of a frame (Figs. 1, 2)” However, the board facing 48 of Muth does not attach to an insulating block, but rather attaches to sides 41 and stiffeners 47 that form an open framework of a door 11 (see column 3 lines 4 - 44), these elements being formed from metal. Panel 46 is apparently also metal, as it is preferably spot welded to the stiffeners 47. Not only would this metal structure made up from the sides 41, stiffeners 47, and panel 46 not be considered by one skilled in the art to constitute an insulating block (for the same reasons as discussed above regarding the open, hollow aluminum door of Tlemcani), but the board facing 48 is attached to the bottom of this structure, not a top surface. Furthermore, board facing 48 does not engage any edge of the frame 10; it is the sides 41 that engage the frame 10, as shown in Figure 4, and they engage the lower edge of the frame, not the upper edge. Thus, it is felt that the Muth structure lacks the claimed elements, and thus the combination suggested by the Examiner would not meet the limitations of claim 12 even if the Tlemcani patent were to teach the structure set forth in claim 1, which is not the case.

It is also felt that there is no motivation to combine the references in the manner suggested by the Examiner. As pointed out above, the Muth structure engages the lower edge of the frame, not the upper edge, and thus one would not look to Muth for elements to substitute into Tlemcani. The Examiner argued that it would be obvious to modify Tlemcani to include an outwardly extending block cap to engage the upper edge of the frame in order to enhance the insulating properties, but it is unclear how such would enhance the insulating properties compared to the engagement of the door 14 with the gasket 34 on the flange 32. Furthermore, while not stated in Tlemcani, it appears that the Tlemcani structure is intended to provide a flush upper surface, since the flange 32 is positioned below the upper edge of the frame, allowing the outside surface 28 of the door 14 to be substantially flush with the upper edge (as shown in Figure 7), since the handle

41 retracts into the door 14 (as shown in Figure 5), and since the outer surface 24 is depicted with treads, suggesting that it is designed to be walked upon (see Figure 1). Attaching a cap to the outer surface 28 would cover the treads and would make the door 14 stick above the level of the frame 12. Also, the cap would need to be modified to allow the handle 41 to be accessed, and neither reference cited by the Examiner teaches how such modification would be achieved. It might also be noted that the board facing 48 taught by Muth et al. extends beyond the panel 46 on all sides (see Figure 1); if a cap extending on all sides were employed in a ceiling hatch having the presently-claimed structure, the portion extending over the hinge would cause interference and prevent the proper operation of the hinge, so the door would not open. Thus, it is not felt that one would be motivated to make the suggested modification of Tlemcani.

For the reasons set forth above, it is felt that claim 12 provides further distinction over the cited references.

E. New Claims

New claims 14-20 contain the limitations of either claim 1 or claim 8, and thus should be allowable for the reasons set forth above regarding those claims. Additionally, these claims are felt to provide further distinction for the reasons set forth below.

New claims 14-16 are dependent on claim 1 and set forth the preferred materials of the insulating block. These limitations are felt to provide further distinction over the Tlemcani structure, which employs a door made of aluminum. Claim 14 requires the insulating block to be of a material providing a high R-value. While no particular R-value is set forth in the claim, it is felt that one skilled in the art would understand that such a material would be one providing a

significantly greater R-value for a certain thickness than would be provided by common construction materials. For the reference of the Examiner, included herewith as Attachment C is a table listing R-values of several materials obtained from the website of www.coloradoenergy.org (URL: <http://www.coloradoenergy.org/procorner/stuff/r-values.htm>). The table shows, as examples of "Construction Materials", an R-value/inch thickness of 1.25 for softwood lumber and 0.08 for poured concrete, while materials listed as "Insulation Materials" provide an R-value/inch of 2 or more. It is felt that one skilled in the art would understand the term "a high R-value material" as recited in claim 14 to be a material having an R-value/inch in the range set forth in this table for "Insulation Materials". It should also be pointed out that the table shows polymer foams, such set forth in claim 15 and pointed out in the present specification as a preferred high-R-value material, generally provide an R-value/inch of 4 or greater.

New claims 17 and 18 include all the limitations of claim 8, upon which they are dependent, and add the limitations set forth in claims 2 and 3. It is felt that these claims should be allowable for the reasons set forth above with regard to claims 8 and 2.

New claims 19 and 20 include the limitation that the frame have a height of at least about 11 inches. As discussed in paragraph [0037] of the specification, this height facilitates placing a substantial thickness of insulation surrounding the frame. None of the prior art of record teaches a frame having such a height with a block that substantially fills the passage formed by such frame and yet can be swung out of the passage formed by the frame. Thus, these claims are felt to provide further distinction and are felt to be clearly allowable over the prior art of record.

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F. Allowance of Claims Requested

For the reasons set forth above, it is felt that all present claims are in a condition for allowance, and such allowance is respectfully requested. If there are any remaining issues to be resolved, Applicant's representatives would be willing to handle such via telephonic interview, if such would be convenient for the Examiner.

Respectfully submitted,
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